REMARKS

Responsive to the Office action mailed October 30, 2007, applicant request entry of the foregoing amendments, consideration of the following remarks and reconsideration of the rejections set forth in said office action.

Claims 1-7 were rejected under 35 USC 112, first paragraph, because the specification did not reasonably provide enablement for any catalyst generally. Applicants respectfully submit that the specification provides enablement for the claims and the rejection should be withdrawn.

Applicant submits that the specification provides a description of the esterification reaction of the present invention wherein lactic acid is esterified using ethanol in the presence of a catalyst to form ethyl lactate. The specification provides several examples of suitable esterification catalysts. It is submitted that a person skilled in the art would be familiar with esterification reactions in general and would be able to select a suitable catalyst without undue experimentation based upon the direction as to several suitable catalyst given in the specification. Applicant submits that the specification provides a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.

In the interest of moving the present application toward allowance, applicants have added new dependent claims 8 and 9 directed toward the exemplary catalyst set forth in the specification.

Claims 1-7 were rejected under 35 USC 103(a) as being unpatentable over Weisburg et al (US 2,406,648). Applicants respectfully submit that Weisberg et al. '648 fails to render obvious the present invention.

The present invention is directed toward a process to obtain ethyl lactate substantially free of water via an esterification reaction in which a mixture comprising ethyl lactate, ethanol, water and heavy products composed of unconverted lactic acid and oligomers of ethyl lactate are continuously extracting from the esterification medium, at a partial degree of conversion of the lactic acid, and subjecting this mixture to a flash separation under reduced pressure, from which two streams are obtained:

- a bottoms stream comprising lactic acid and oligomers (which can be recycled in the esterification reaction medium);
- a top stream comprising a mixture of ethyl lactate, ethanol and water;

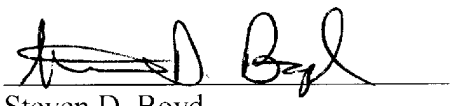
and then subjecting this top stream to a fractional distillation, from which ethyl lactate substantially free of water is obtained. The present invention is directed toward a continuous process for the preparation of ethyl lactate by esterification of lactic acid using ethanol with an esterification catalyst. The present inventors discovered that by using lactic acid as the staring "lactate material', a continuous process to provide ethyl lactate of high purity is provided. The reactions products of the esterification reaction of the present invention are ethyl lactate and water. No salts are formed.

Weisberg et al '648 discloses a process of preparing water-soluble esters of lactic acid such as butyl lactate wherein an alkali metal or alkaline earth lactate is esterified with a lower alkyl alcohol in the presence of a strong mineral acid. As set forth at column 2, lines 29- 35, the process disclosed in Weisberg et al. '648 unavoidably causes the formation of an alkali or alkaline earth metal salts which along with impurities in the lactate salt raw material forms a sludge which has the tendency to occlude and retain tenaciously a portion of the ester. The present inventors discovered that by using lactic acid as the starting material, the formation of this "unavoidable" sludge could be avoided and a more efficient and cost effective esterification process for the formation of ethyl lactate is provided. Applicants submit that Weisberg et al. '648 fails to render obvious the process of the present invention which avoids the formation of "unavoidable sludge" as disclosed in Weisberg '684. It is submitted that there is no disclosure, either express or by implication in Weisberg et al '648 to use a different staring material let alone that the use of lactic acid as the starting materials would avoid the "unavoidable" sludge.

In view of the foregoing remarks, applicant respectfully submits that claims 1-7 of the present application are in condition for allowance and prompt favorable action is solicited.

Date: January 15, 2008

Respectfully submitted,



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